

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of
Gerald SANCHEZ et al.
Serial No. (unknown)
Filed herewith

METHOD AND DEVICE FOR PRODUCING
A METALLIC COATING ON AN OBJECT
EMERGING FROM A BATH OF MOLTEN METAL

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to the first Official Action and calculation
of the filing fee, please amend the above-identified
application as follows:

IN THE CLAIMS:

Please amend claim 3 as follows:

3. (Amended) A method according to claim 1,
characterized in that the exit channel is constructed in such
a way that the annular gap is of the same order as the height
of the meniscus, the annular gap being the distance between
the inside wall of the exit channel and the metallic coating
formed beyond the meniscus.

Please amend claim 5 as follows:

5. (Amended) A method according to claim 1,
characterized in that the exit channel is constructed so that
the ratio between the average thickness of the said object

and the opening of the exit channel (3) is greater than or equal to 0.8.

Please amend claim 6 as follows:

6. (Amended) A method according to claim 1, characterized in that the magnetic field is alternating and steady-state, and is created by means of a flat inductor (9).

Please amend claim 7 as follows:

7. (Amended) A method according to claim 1, characterized in that the magnetic field is created by means of an alternating current whose frequency is such that the ratio between the capillary length and the thickness of the magnetic skin in the metallic coating is greater than or equal to 3.

Please amend claim 9 as follows:

9. (Amended) A method according to claim 1, characterized in that means of exerting pressure on the molten metal are used for maintaining the height of the meniscus in the exit channel.

Please amend claim 10 as follows:

10. (Amended) A method according to claim 1, characterized in that the means of electromagnetic pumping (16, 17) of the molten metal are used for maintaining the

height of the meniscus in the exit channel

Please amend claim 11 as follows:

11. (Amended) A method according to claim 1, characterized in that the object is a long and slender object with constant cross-section.

Please amend claim 15 as follows:

15. (Amended) A device according to claim 12, characterized in that the magnetic field is alternating and steady-state, and the means for creating it include a flat inductor.

Please amend claim 16 as follows:

16. (Amended) A device according to claim 12, characterized in that it comprises means for exerting pressure (2, 10) on the molten metal so as to maintain the height of the meniscus in the exit channel.

Please amend claim 17 as follows:

17. (Amended) A device according to claim 12, characterized in that it comprises means for electromagnetic pumping (16, 17) of the molten so as to maintain the height of the meniscus in the exit channel.

R E M A R K S

Gerald SANCHEZ et al.

Following entry of this preliminary amendment,
claims 1-17 are pending in the application.

Attached hereto is a marked-up version of the
changes made to the claims by the current amendment. The
attached page is captioned Version with markings to show
changes made.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

3. A Method according to one of the preceding claims, claim 1, characterized in that the exit channel is constructed in such a way that the annular gap is of the same order as the height of the meniscus, the annular gap being the distance between the inside wall of the exit channel and the metallic coating formed beyond the meniscus.

5. A method according to one of the claims 1 and 4, claim 1, characterized in that the exit channel is constructed so that the ratio between the average thickness of the said object and the opening of the exit channel (3) is greater than or equal to 0.8.

6. A method according to any one of the preceding claims, claim 1, characterized in that the magnetic field is alternating and steady-state, and is created by means of a flat inductor (9).

7. A method according to anyone of the preceding claims, claim 1, characterized in that the magnetic field is created by means of an alternating current whose frequency is such that the ratio between the capillary length and the thickness of the magnetic skin in the metallic coating is greater than or equal to 3.

9. A method according to any one of the preceding claims, claim 1, characterized in that means of exerting

pressure on the molten metal are used for maintaining the height of the meniscus in the exit channel.

10 A method according to any one of the preceding claims, claim 1, characterized in that the means of electromagnetic pumping (16, 17) of the molten metal are used for maintaining the height of the meniscus in the exit channel

11. A method according to any one of the preceding claims, claim 1, characterized in that the object is a long and slender object with constant cross-section.

15. A device according to any one of the claims 12 to 14, claim 12, characterized in that the magnetic field is alternating and steady-state, and the means for creating it include a flat inductor.

16. A device according to any one of the claims 12 to 15, claim 12, characterized in that it comprises means for exerting pressure (2, 10) on the molten metal so as to maintain the height of the meniscus in the exit channel.

17. A device according to any one of the claims 12 to 16, claim 12, characterized in that it comprises means for electromagnetic pumping (16, 17) of the molten so as to maintain the height of the meniscus in the exit channel.